



Analytical Services in Support of PADEP Programs

Alpha Analytical has provided this technical bulletin to summarize our analytical services in support of PADEP programs including: **PA Act 2 Land Recycling Program** (25 Pa. Code Ch. 250); **PA Storage Tank (UST) Corrective Action Program** (25 Pa. Code Ch. 32) and **PA Hazardous, Municipal, Residual Waste Programs** (25 Pa. Code Ch. 261; 262; 268; 271; 287).

Compound List: Alpha Analytical supports the **Target Compound List (TCL) / Target Analyte List (TAL)**, as defined by USEPA for water, soil and sediment samples, as well as Soil Gas/Vapor Intrusion sample analysis. Additional analytes are available to support PA UST, Clean/Regulated/Historic Fill, and PA Form U waste characterization projects, as well as project-specific objectives.

Analytical Methods: Alpha Analytical supports a full range of analytical methods including: VOCs, SVOCs, Pesticides, PCBs, Metals, and General Chemistry parameters. Methods configuration to determine TCL/TAL analytes in PA-Waters and PA-Soils include:

PA Water Methods	
Test Group	Analytical Methods
TCL VOCs	8260-full scan
VOC-LL / 1,4-Dioxane	8260-SIM
VOC-LL / EDB + DBCP	504 / 8011
TCL SVOCs	8270-full scan + 8270-SIM
PAHs	8270-SIM
SVOC-LL / 1,4-Dioxane	8270-isotope dilution
TCL Pesticides	8081
PCB Aroclors	8082
TAL Metals	6020 (ICP-MS CCT)/7470A
General Chemistry	EPA / Standard Methods

PA Soil Methods	
Test Group	Analytical Methods
TCL VOCs	8260-full scan
Soil-VOCs	5035 TerraCores / EnCores
TCL SVOCs	8270-full scan
TCL Pesticides	8081
PCB Aroclors	8082
TAL Metals	6020 ICP-MS / 7471A
General Chemistry	EPA / Standard Methods

PA Air Methods	
Test Group	Analytical Methods
SHS VOCs	EPA TO-15
SVOCs	TO-13 & TO-10 Mod
Other COCs	EPA/ASTM/OSHA/NIOSH

Laboratory Accreditation: Alpha Analytical is accredited by the National Environmental Laboratory Accreditation Program (NELAP), by PADEP (#68-03671), as well as in 30 other states. Alpha Analytical supports a full range of groundwater, surface water, soil, sediment, and tissue sample analysis for TCL/TAL and additional analytes by EPA and Standard Methods, as well as vapor intrusion samples by EPA TO-15.

Data Report Formats: Alpha Analytical offers a Standard Data Reporting format with Results and Summary QC; with full QC data packages available, as needed. Sample analytical results reported to the method detection limit (MDL) with J-qualifiers meet most PA-Water and PA-Soil regulatory criteria.

Vapor Intrusion Analytical Services: PADEP recommends a NELAP accredited laboratory be used for vapor intrusion investigations (PADEP does not offer air certification). Alpha Analytical holds NELAP accreditation for a wide range of VOCs and SVOCs.

Regulatory Criteria: Alpha Analytical's secure on-line data access system provides for a quick and efficient way to compare analytical data to PADEP Regulatory Criteria using Alpha's web-based "criteria checker" Data Merger system:

PA Act 2 Statewide Health Standards Medium Specific Concentrations (MSCs) for Used Aquifers TDS ≤ 2500

Table 1 - MSCs for Organic Regulated Substances in Groundwater

Table 2 - MSCs for Inorganic Substances in Groundwater

Data Merger Criteria for PA Water (ug/L)

(PA-RUAMSC) Water MSCs for Residential Used Aquifers TDS ≤ 2500

(PA-NRUAMSC) Water MSCs for Non-Residential Used Aquifers TDS ≤ 2500

(PA-RNAMSC) Water MSCs for Residential Non-Use Aquifers TDS ≤ 2500

(PA-NRAMSC) Water MSCs for Non-Residential Non-Use Aquifers TDS ≤ 2500

(PA-A2PQL) Water Practical Quantitation Limits (PQLs, dated 2016)

PA Act 2 Statewide Health Standards Medium Specific Concentrations (MSCs) for Soil Direct Contact Values

Table 3a - MSCs for Organic Regulated Substances in Soil: Direct Contact Values

Table 4a - MSCs for Inorganic Regulated Substances in Soil: Direct Contact Values

Data Merger Criteria for PA Soil: Direct Contact (mg/Kg)

(PA-RDCS) Soil MSCs for Residential Soil (0-15 feet) Direct Contact Values

(PA-NRDCS0) Soil MSCs for Non-Residential Surface Soil (0-2 feet) Direct Contact Values

(PA-NRDCS2) Soil MSCs for Non-Residential Subsurface Soil (2-15 feet) Direct Contact Values

PA Act 2 Statewide Health Standards Medium Specific Concentrations (MSCs) for Soil-to-Groundwater Values

Table 3b - MSCs for Organic Regulated Substances in Soil: Soil-to-Groundwater Values

Table 4b - MSCs for Inorganic Regulated Substances in Soil: Soil-to-Groundwater Values

Data Merger Criteria for PA Soil: Soil-to-Groundwater (mg/Kg)

(PA-RSGX) Soil MSCs for Used Aquifers (TDS ≤ 2500) Residential 100X GW Soil to Groundwater Values

(PA-RSGG) Soil MSCs for Used Aquifers (TDS ≤ 2500) Residential Generic Soil to Groundwater Values

(PA-NRSGX) Soil MSCs for Used Aquifers (TDS ≤ 2500) Non-Residential 100X GW Soil to Groundwater Values

(PA-NRSGG) Soil MSCs for Used Aquifers (TDS ≤ 2500) Non-Residential Generic Soil to Groundwater Values

PADEP Management of Fill Soil Values

PADEP Management of Fill Policy (Doc. #258-2182-773, dated January 2021) defines Clean Fill Concentration Limits (CFCLs) and Regulated Fill Concentration Limits (RFCLs) as not exceeding PA Act 2 MSCs (25 Pa. Code Ch. 250, Land Recycling Program). In revising the Management of Fill Policy, PADEP no longer uses Tables FP-1a, FP-1b, GP-1a, and GP-1b. Refer to:

<https://www.dep.pa.gov/Business/Land/Waste/SolidWaste/Residual/Pages/default.aspx>

Data Merger Criteria for PA Soil: Management of Fill (mg/Kg)

(PA-CFCL) PA Clean Fill Soil Concentration Limits for Organics and Inorganics (Tables FP-1a and FP-1b)

(PA-RFCL) PA Regulated Fill Soil Concentration Limits (Tables GP-1a and GP-1b)

PA Act 2 Reg Criteria web link:

<https://www.dep.pa.gov/Business/Land/LandRecycling/Standards-Guidance-Procedures/Pages/Statewide-Health-Standards.aspx>

Please contact your Alpha Analytical Project Manager or Account Representative for more information.

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